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BUREAU OF AIR POLLUTION CONTROL
301 39th Street
Pittsburgh, Pennsylvania 15201

July 13, 1989

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Mr. Robert P. DeTorre
P.O. Box 269
Turtle Creek, PA 15145

Dear Mr. DeTorre:

Per your request, we are submitting the results of our analysis of quench water samples taken by Bureau personnel at USX's Clairton Coke Works. The quench water is used to cool the red hot coke and to prevent it from burning after being pushed out of the coke ovens. The results are listed in the attached table.

The purpose of the water sampling was to obtain a rough estimate of the concentration of suspected pollutants when contaminated water generated during the coking process was added to the coke quenching water. Since some of the quench water is evaporated, pollutants in the quench water might become airborne and affect ambient air quality. Sampling was also performed during a period when contaminated water was not being added to the quench water.

The water samples were taken by Bureau personnel by lowering a sample container into the various coke quenching tower station sumps. The sumps contain make-up water from the river, unevaporated runoff water from the hot coke and any contaminated water directed to a sump. USX has the capability to vary the amount of contaminated water entering the various sumps. Since only a rough estimate was desired, there was not any special procedures taken to ensure that a homogeneous sample was obtained. Any future sampling of the quench water may be performed differently, depending on the purpose of the sampling.

At this time the Bureau is unable to determine what effect, if any, these concentrations of various water pollutants have on ambient air quality. Presently, contaminated water is not being added to the quench water.

We apologize for the delay in reporting our results to you, but we did not receive the complete analysis results until the first week of July.

Yours truly,

William U. Clark

William U. Clark
Air Pollution Engineer

WUC/nh

Enclosure

cc: C. J. Goetz

D. Graham

QUENCH TOWER SUMP WATER ANALYSIS - USX CLAIRTON COKE WORKS

April 13, 1989

Total Hydrocarbon (THC) & Benzene Concentration

Sample Location (Batteries)	Sampling Date	Ammonia Nitrogen Concentration (PPM)	Cyanide Ion Concentration (PPM)	Direct Injection Analysis ³		Headspace Analysis ³	
				THC (PPM)	Benzene (PPM)	THC (PPM)	Benzene (PPM)
1, 2 & 3	April 13, 1989 ¹	88	0.35	<1	<1	10	<1
7, 8 & 9	April 13, 1989 ¹	100	0.5	<1	<1	2	<1
15	April 13, 1989 ¹	54	<0.1	<1	<1	6	<1
19 & 20	April 13, 1989 ¹	96.6	0.5	<1	<1	10	<1
B	April 13, 1989 ¹	1.5	<0.1	<1	<1	<1	<1
1, 2 & 3	March 15, 1989 ²	1,000	1.0	81	<1	9	1
7, 8 & 9	March 15, 1989 ²	1,080	30.0	92	<1	4	4
15	March 15, 1989 ²	172	7.0	<1	<1	<1	<1
19 & 20	March 15, 1989 ²	1,310	75	88	<1	3	1
B	March 15, 1989 ²	29	5.5	<1	<1	<1	<1
Interim Pushing Mission Control Steam Supply Water (River Water)	March 15, 1989	0.79	<0.1	<1	<1	2	<1

Contaminated water not added to quench water.

Approximately 20-25 percent of contaminated water generated was added to quench water.

Due to the nature of the sample, two different analytical methods were used.